

## THREE NEW WATER-STRIDERS FROM BRAZIL

(Hemiptera)

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The present paper contains the descriptions of one new species of the genus *Ovatametra* (Gerridae) and two new species of *Rhagovelia* (Veliidae). The types are in the Drake Collection (USNM).

The American genus *Ovatametra* Kenaga is represented in Neotropical Americas by eight species, including the new one described below from Brazil. The members of this genus are: *O. amnica* Drake (1957) from Panama; *O. bella* Drake (1957) from Bolivia; *O. fusca* Kenaga (1942) from Brazil; *O. parvula* (Drake & Harris) (1935) from Brazil; *O. minima* Kenaga (1942) from Peru; *O. obesa* Kenaga (1942) from Brazil; and *O. thaumana*, n. sp., which is characterized below.

*Ovatametra thaumana*, n. sp. (Plate 35)

**APTEROUS MALE:** Small, oblong, velvety black with an inverted, U-shaped mark in front of eyes and the posterior margin behind vertex of head, two broad longitudinal stripes (one on each of median part of pro- and mesonotum), and the posterior margin of last three or four dorsal tergites of abdomen yellowish brown; meso- and metapleura with longitudinal, black stripe near the upper margin; abdomen beneath deep black with hind margin of seventh tergite and genital segments testaceous; thorax and head beneath testaceous with a slight tinge of orange; pleura and thorax beneath with a little silvery lustre, also the outer parts of the dorsal abdominal tergites; labium with the first, second and basal half of third segments testaceous, the distal half of third and last segment blackish fuscous and shining. Anterior legs testaceous with the posterior face of femora blackish fuscous, tibiae brownish testaceous, tarsi dark fuscous. Intermediate and hind legs brownish. Female differs slightly from the male in having the abdomen beneath almost entirely testaceous and both metanotum and second dorsal tergite marked with a pair of large, flavotestaceous spot (one on each side). The rest of the markings are nearly the same as those in the male.

Length 2.50 mm. (male), and 2.85 mm. (female); width 0.92 mm. (male) and 1.24 mm. (female).

**HOLOTYPE** (male) and **ALLOTYPE** (female), Caioba, Parana, Brazil, XI.1958, F. Plaumann. One paratype and several nymphs were also taken with the type.

The color markings as illustrated (Plate 35, type) and anten-

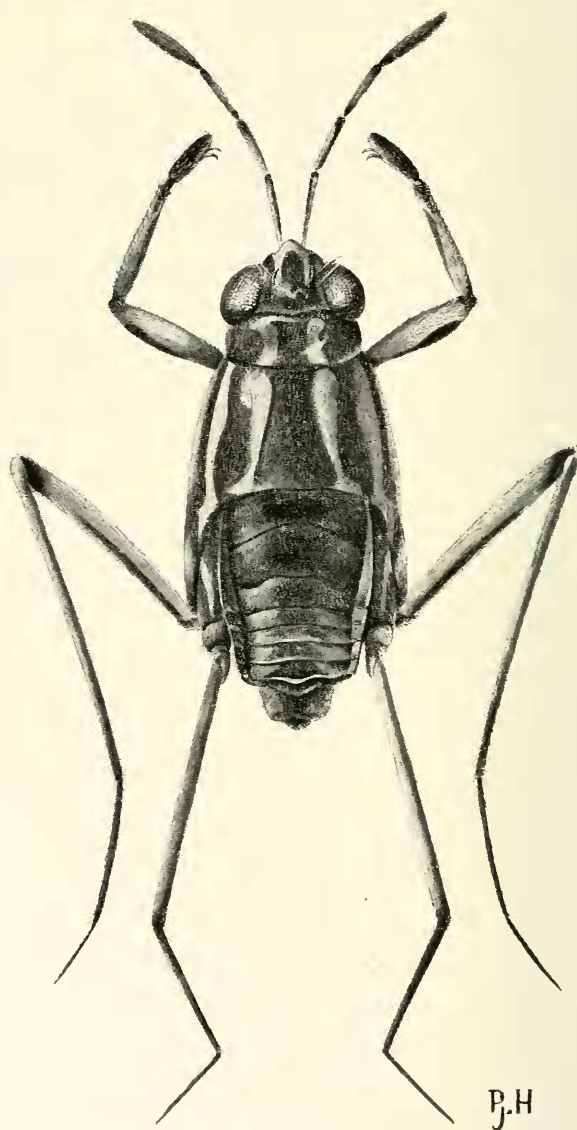


PLATE 35

*Ovatametra thaumana*, drawn from type by Patricia Hogue. Enlarged  $\times 50$ .

nal segments distinguish this species from other members of this genus.

*Rhagovelia occulcata*, n. sp.

**BRACHYPTEROUS FORM:** Small, blackish with the subapical, transverse, yellowish orange band of pronotum interrupted at middle and not wider than the posterior part of vertex, quite bluish beneath, a spot on last dorsal tergite of abdomen, median part of last segment of venter, and outer margins of connexiva shining black. Legs entirely shining black, including acetabula, coxæ and trochanters. Antennæ with the narrow, basal part of first segment testaceous. Female with the shining black margins of connexiva much wider beyond apical half than in the male.

Length 3.00 mm. (male), and 3.20 mm. (female); width 1.25 mm. (male) and 1.35 mm. (female).

**APTEROUS MALE:** Head with usual median, longitudinal, black line and basal impressions. Antennæ 2.58 mm. long, with the usual blackish bristly hairs on basal segments, measurements of segments: I, 78; II, 48; III, 42; IV, 38. Pronotum very short, not longer than an eye. Mesonotum wider across humeral angles than median length (94:80), covering most of metanotum. Abdomen gradually narrowed posteriorly, about two and one-half times wider at base than at apex; connexiva with lateral sides slowly converging posteriorly, with the last three segments more sharply narrowed than others, termination apically in an acute angle opposite apex of last abdominal tergite. Abdomen beneath without spines, ridges or furrows. All coxæ and trochanters unarmed. Legs long, slender, femora slender. Anterior tibiæ subcylindrical, 1.35 mm. long, slightly longer than femora, feebly flattened beneath on apical fourth. Middle legs very long, femora 2.25 mm. long tibiae 1.50 mm. long, tarsal II and III nearly subequal (74:72). Hind femora slender, at thickest part smaller than the base of middle femora, 1.60 mm. long, armed a little beyond the middle with a moderately long, slender, posteriorly-leaning spine, thence without spines; tibiæ 1.80 mm. long, straight, unarmed.

**APTEROUS FEMALE:** Slightly stouter than male, antennal measurements: Segment I, 77; II, 53; III, 42; IV, 35. Mesonotum strongly extended posteriorly, rounded apically, with apex covering all of median parts at metanotum. Connexiva wider than in male, nearly upright, with apical half slightly inflated, gradually converging posteriorly, with apices not quite touching each other, narrowly truncate behind. Abdomen more convergent posteriorly than in male. Posterior femora slender and unarmed; tibiæ straight, also without spines.

**MACROPTEROUS FORMS:** Very similar in general aspect in both sexes. Hemelytra blackish fuscous, extending beyond apex of

abdomen and not entirely covering connexival segments in repose. Pronotum pentagonal, wider across humeri than median length, not produced behind in female. Length 3.85 mm. (including wings), width 1.50 mm.

HOLOTYPE (male) and ALLOTYPE (female), both apterous, Morretes, Parana, Brazil. *Paratypes*: 26 specimens, all taken with type, in the same school in the ripples of a small river.

This species has slender hind femora (scarcely as thick as base of middle femora), which are armed beneath (just behind the middle) with only a single spine in male and unarmed in female. The hind tibiae are unarmed in both sexes. On the ventral side of the hind femora, there is a thin row of eight or nine long, black hairs on the apical three-fourths in the male and five or six such hairs on the distal half in the female.

*Rhagovelia zela*, n. sp.

APTEROUS FORM: Small, blackish, provided with grayish, recumbent pubescence, beneath bluish pruinose, pronotum with the subapical, transverse, yellowish orange band divided at the middle and not wider than base of vertex. Antennae fuscous-black, furnished with the usual, long, bristly hairs on first two segments, basal part of first segment testaceous. Labium shining black. Legs deep black, shining, with inferior margins of all acetabula, and the coxae and trochanters of front and hind legs testaceous, those of middle legs shining black. Genital segments of both sexes and a median spot of last genital segment beneath shining black, also the last dorsal tergite of the abdomen. Length 2.60 mm. (male) and 3.20 mm. (female), width 1.10 mm. (male) and 1.35 mm. (female).

MALE: Head with the usual median longitudinal line and basal impressions. Antennae 1.92 mm. long, segmental measurements: I, 54; II, 35; III, 32; IV, 32. Pronotum short, scarcely as long as an eye; mesonotum finely, deeply punctate, wider across humeri than median length (85:60), sharply and slightly convexly narrowed on lateral sides behind humeral angles, with apex rather wide and slightly convex; metanotum narrowly exposed behind mesonotum, a little more exposed along lateral sides of mesonotum. Abdominal tergites slowly evenly tapering apically, with seventh segment less than half as wide as basal one; connexiva feebly convexly narrowed apically, terminating in an acute angle opposite hind margin of last tergite of abdomen; venter without spines, furrows or median ridge. Coxae and trochanters unarmed. Legs slender, moderately long; forelegs with tibiae slightly longer than femora, only slightly enlarged apically, slightly flattened beneath on apical third. Middle legs very long, femora 1.62 mm. long, tibiae 1.00 mm. long, tarsal segments I and

II long, subequal in length. Posterior femora 1.10 mm. long, at their widest point (large near spine) not as thick as the base of middle femora, armed just behind the middle beneath with a fairly large, sharp, posteriorly-leaning spine, thence to apex with six or seven much smaller spines that gradually decrease in size; tibiae 1.00 mm. long, straight, unarmed.

**FEMALE:** More robust than, but with color, markings, and the size and armature of hind femora as in male. Antennae 1.92 mm. long, measurements of segments: I, 58; II, 28; III, 34; IV, 34. Middle and hind femora scarcely reaching apex of abdomen. Hind femora with armature as in male. Connexiva wider than in male, upright, narrowed apically, slightly more narrowed on last three segments, with apices truncate and widely separated from each other. Length 3.20 mm., width 1.35 mm.

**MACROPTEROUS FORMS:** Male and female very similar in general aspect. Pronotum pentagonal, strongly convex across humeral angles. Hemelytra blackish fuscous, extending considerably beyond tip of abdomen, not entirely covering connexival segments in repose. Length 4.00 mm.

**HOLOTYPE** (male) and **ALLOTYPE** (female), both apterous, XII, 1958, Guaramirim, Santa Catarina, Brazil. *Paratypes:* 5 specimens, all taken in the same school with type.

Closely related to *R. modesta* Bacon and *R. occulcata*, n. sp., and separated from them by the male parameres, the antennal measurements, armature of hind femora in both sexes, and the female connexival segments. The armature of femora of both sexes distinguishes *R. zela* from *R. occulcata*.

